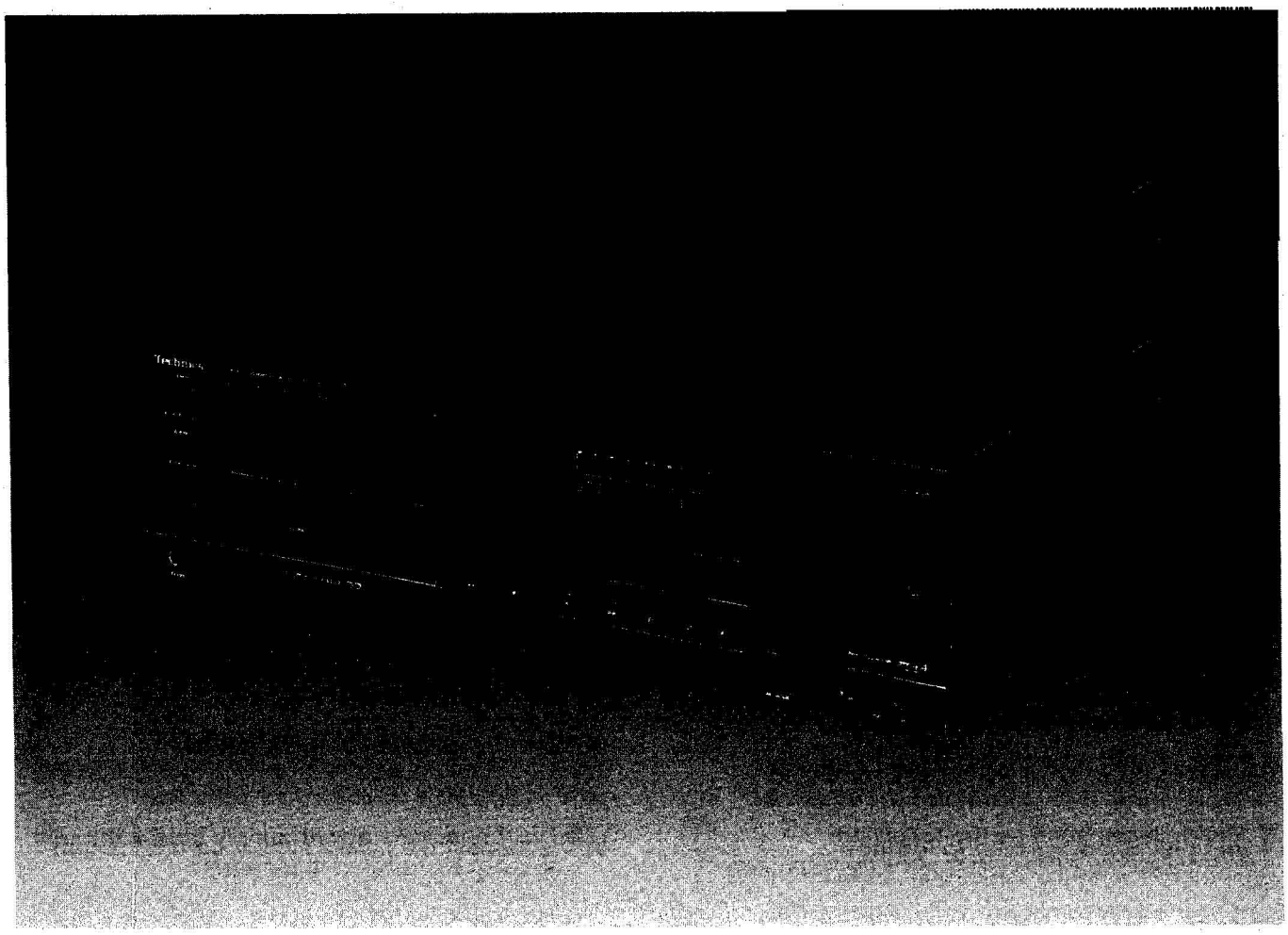
Technics

Stereo Cassette Deck

RS-B565

OPERATING INSTRUCTIONS



These instructions also apply to units of different colour.

Notes:

- Specifications differ according to the area code.
- The "EB" area code, for example, indicates Unitod Kingdom specifications.
- The "EB" indication is shown on the packing case and serial number tag.

Befere eperating this unit, please read these instructions completely.

EB

Dear Stereo Fan

We want to thank you for selecting this product and to welcome you to the growing family of satisfied Technics product owners around the world.
We feel certain you will get maximum enjoyment from this new addition to your home.
Please read these operating instructions carefully, and be sure to keep them handy for convenient reference.

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Suggestions for Safety

■ Use a atandard AC wall outlet

1. **Use from an AC power source of high voltage, auch ae for an air conditioner, is very dangerous.**
   There is the poesibility that a fire might be ceused by making such a connection.
2. **A DC power source connot he used.**
   Be sure to check the power source cerefully, especially on a ship er other place there DC is used.

■ Graap the plug whan dlaconnecting the powor aupply cord

1. **Wat handa are dangeroue.**
   A dangsrous electric sheck may result if the plug is touched by wet hands.
2. **Never placo heevy iteme on top of the power supply cord, and nevor force it to hend eharply.**

■ Place tha unit whare it will be well ventilated

Place this unit at least 10 cm (4") away from wall surfaces, etc.

■ Avoid plases such aa the following:

In direct sunlight or in other placoe where the tamperature is high.
In placea whore there ie exceesive vibration or humidity.
Such conditions might damage the cabinet and/or other component parts and thereby shorten the unit's service life.

■ Be aure to place the unit on a flat, level aurface

If the surface is inclined, a malfunction may result.

■ Never attempt to repair or reconatruct this unit

A serious electric shock might occur if this unit is repaired, disassemblod or reconstructed by unauthorised persons, or if the internal parts are accidentally touched.

■ Taka particular care if children are present

Never permit children to put anything, especially metal, inside this unit. A serious electric sheck or malfunction ceuld occur if articles such as ceins, nsedles, screwdrivers, etc. are insorted through the ventilation holes, etc. of this unit.

■ If water is spillsd on tha unit

Be extremely cereful if water is spilled on the unit, because a fire or sorious electric sheck might occur. Immediately disconnect the power cerd plug, and censuit with your dealer.

■ Avoid spray-type insecticides

Insecticides might ceuse cracks or "cloudiness" in the cabinet and plastic parts of this unit. The gas used in such sprays might, morecver, be ignited suddenly.

■ Never use alcohol or paint thinner

These and similar chemicels should never be used, because they might ceuse flaking or cloudiness of the cebinet finish.

■ Disconnect the power supply cord if the unit will not be used for a long time

If the unit is left fer a long time with the power ON, this will not only shorten its useful operation life, but may also cause other troubles.

■ If trouble occurs

If, during operation, the sound is interrupted or indicators no longer illuminate, or if abnormal odor or smoke is detected, immediately disconnect the power cerd plug, and centact your dealer or an Authorised Service Centre.

For United Kingdom

("EB" area code model only)
The "EB" indication is shown on the serial number tag.

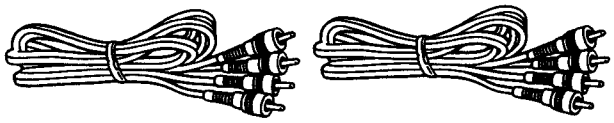
Important
THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is colourod BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

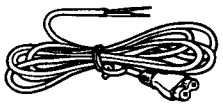
This apparatus was produced to BS 300.

Accessories

•Sterec connection cables 2



•AC power supply cord 1

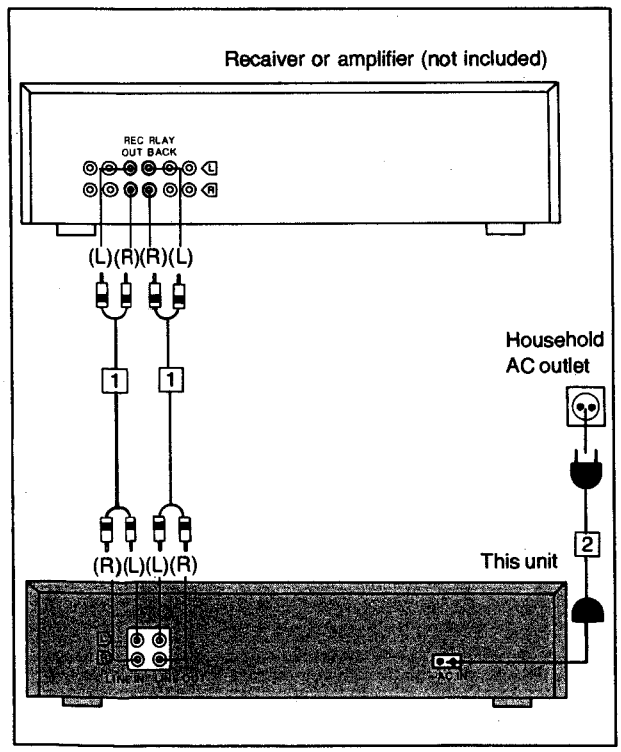


Connections

Make connections in the numbered sequence by using the included cables.

[1] Connect tho storao connsctlon csbloa.

[2] Connect tho AC powor supply cord.

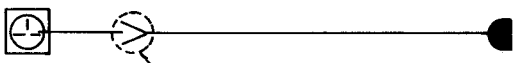


AC powor aupply cord ([2])

The configuration of the AC outlet and AC power supply cord differs according to area.

For United Kingdom

Household AC outlet



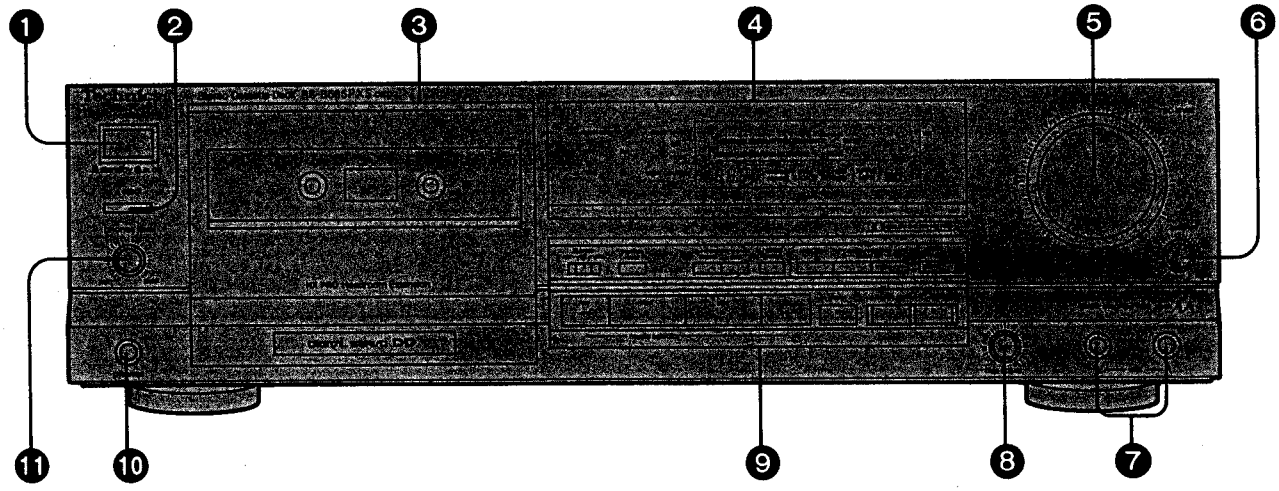
Fit a suitable plug to the AC power supply cord.

Placement hints

If this unit is placed near a receiver or a tuner, a "hum" noise may be heard during tape playback, recording, or AM reception of the receiver or the tuner.
If this occurs, leave as much space as possible between the units, or place them where there is the least amount of "hum".

Note:
This unit is a precision instrument. Be sure to place it on a flat surfaco.

Front Panel Controls and Functions



Control section I

1 Power "standby ⏻ /on" awitch (power/▮ standby ⏻ ▬ on)
This switch switchos ON and OFF the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the standby ⏻ position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

1 Ejeot button (⏏ eject)
This button can be used to open the cassette holder.

1 Caesette holdor

; Dieplay section

1 Rooording-level control (roc level)
This control can be used to regulato the recording level and the poak level.

: Recording-balance control (balance)
This control can be used to balance the left and right cound levels during recording.

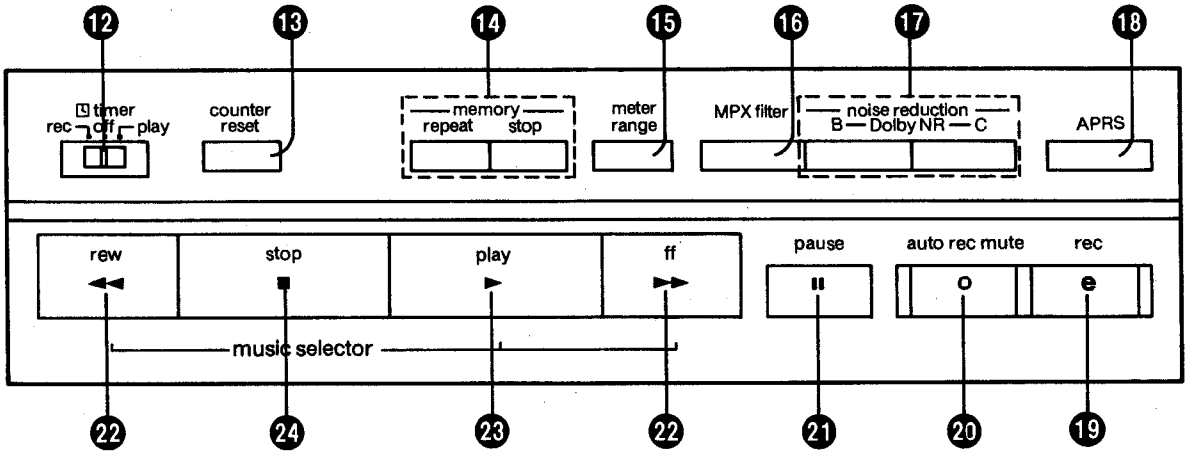
1 Microphone jacks (mic)

: Dias-adjustment control (bias adjust)
The frequency response for each tape type can be equalised by using this control.

1 Operation section

10 Headphones jack (phones)

10 Headphones volume control (phones level)



Control section II

Timer ewitch (timer)
This switch is used to automatically begin a tape recording or tape playback at a certain time, selected by a timer (not included). (Refer to page 16.)

Counter reeet button (counter reeet)
This butten can be used to reset the tape counter indication tc "000".

Memery-mode buttone (memory repeet/etop)
repeat: This button can be used to set this unit to the "A-B repeat" mode. (Refer to page 9.)
stop: This button can be used to rewind the tape to the preset "000" point when the rewind (◀◀) button is pressed. (Refer to page 9 and 12.)

Meter-renge eelector (meter renge)
This selecter can be used to select the meter-range display of the input level meter.

Multiplex filter ewitch (MPX filter)
This prevents the Dolby circuit from operating in error when FM steree breadcasts are recorded using the noise reduction function. (Refer to page 15.)

Dolby noiee-reduction buttone (nelee reduction)
These buttens can be used to reduce the hiss noise that is characteristic ef tape. This unit is provided with beth the Dolby B NR-type and C NR-type noise-reduction systems.

APRS button (APRS)
This button can be used to hold tbe peak level while monitoring the input seund. (Refer to page 13.)

Record button (rec/●)
This button can be used to change the tape deck to the recording stand-by mode.

Autometic-record-mutlng button (euto rec mute/○)
This button can be used to make a silent interval on the tape being recorded on tape deck.

Peuee button (peuee/❚❚)
This button can be used to temporarily stop the tape playbeck or recording of tape deck.

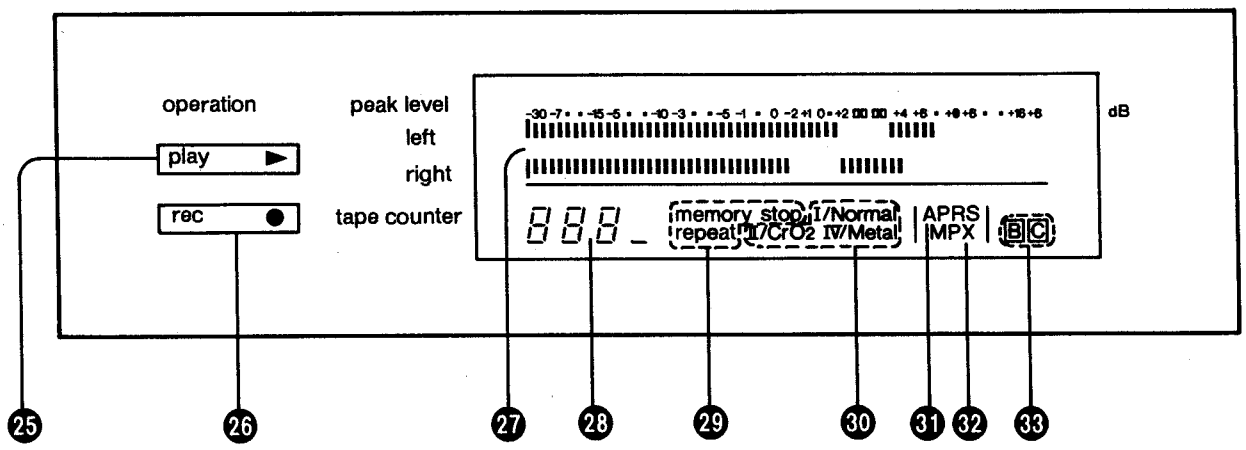
Rewind/feet-forwerd/eeerch buttone (rew/◀◀, ff/▶▶)
These buttons can be used to fast forward or rewind the tape, or to easily search for the tune's beginning of the tape quickly.

Pleybeck button (pley/▶)
This button can be used to start the playback or recording cf the cassette.
(The tape will then begin moving in the left-to-right direction.)

Stop button (etop/■)
This button can be used to stop tape movement.

Front Panel Controls and Functions

(continued)



Indicators section

㉕ Play back Indioator (play/▷)
When this indicator illuminates steadily, it indicates that this tape deck is in the playback mode er the recording mode. When it flashes continually, this is an indication that this tape deck is in the pauso mode or the recording stand-by mode.

㉕ Recording Indicator (reo/○)
This indicator illuminates to indicate that this tape deck is in the reccrding stand-by mode, or is recording.

㉕ Input level meter
During playback, this meter indicates the level of the recorded sound.
During recording, it indicates the leval being recorded, adjusted by the recording-level control.

㉕ Tape ceunter
Indicates the amount of tape movement.

㉕ Mamory-mode Indioatore (mamory repeet/atop)
Each indicator illuminates to show which of the memory mode was set by the memory-mede buttons.

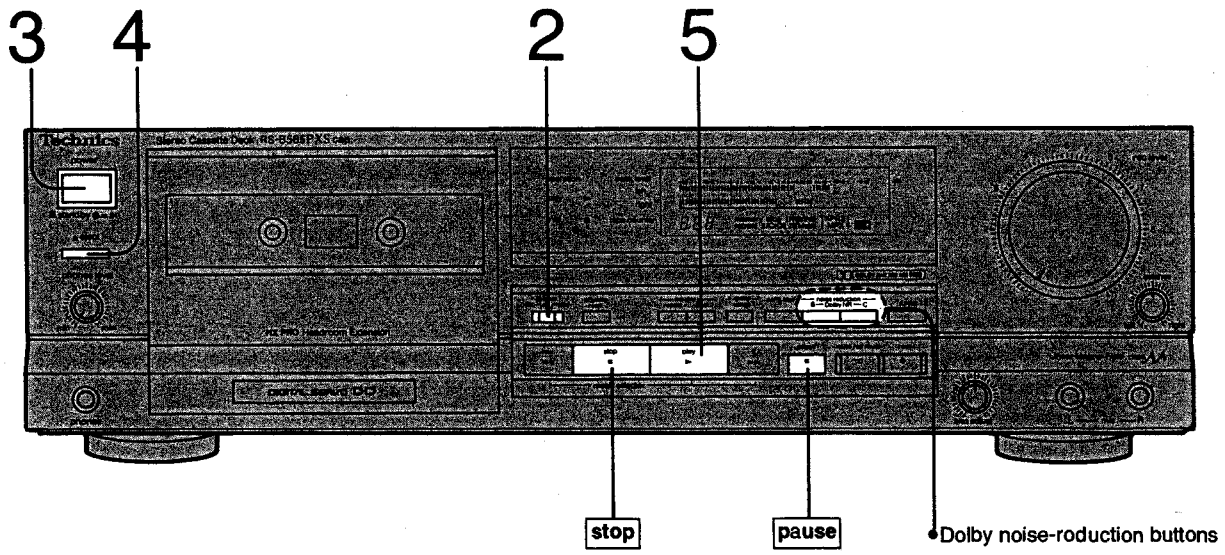
㉕ Tape-eelect Indicatore
The type of tape belng used will be automatically detected and the indicator will illuminate.

㉕ APRS Indicator (APRS)
Illuminates to Iodicate that the "APRS" is set to "on" in the recording staod-by mode.

㉕ Multiplex filter Indicator (MPX)
Illuminates to indicate that the multiplex filter is sot to "on".

㉕ Dolby nolae-reduction Indicatora (B, C)
Each indicator illuminates to show the type of Dolby noise-reduction system selected by pressing one of the Dolby noise-reduction buttions.

Playback



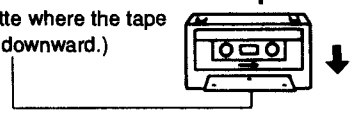
Normal play

1 **Switch the amplifier ON, and select its "tape" input source.**

2 **Switch OFF the timer switch.**

3 **Switch ON the power "standby ⏻ /on" switch.**

4 **Press the eject button to open the cassette holder, end then insert the cassette tape.**
(Tape part of the oassette where the tape is sxposed should face downward.)



5 **Press the playback button.**
(The playback indicator will illuminate, and playback will begin.)

■ To temporeriiy etop playback

Press the psuse button.
(Tho playback indicator will begin flashing.)
To rosume playback, press the playback button.

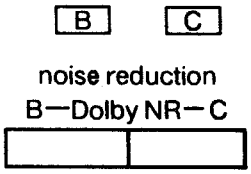
■ To stop playback

Press the stop button.
(Tho playback indicator will switch OFF.)

Note:
Do not press the eject button while the tape is moving; doing so might cause a malfunction or damage the tape.

■ To Iisten to e Dolby NR reoordod tape

Dolby noise-reduction buttons and indicators



Press the button which corresponds to the type of Dolby noise-reduction which was activated during recording.
(The Dolby noise-reduction indicator now lights).

•To switch OFF the Dolby noise-reduction system, press the button corresponding to the Dolby noise-reduction indicator that is illuminated. (The indicator will then switch OFF.)

Playback (ccntinued)

■ About tho Dolby noise-reduction recording/playback ayatem

The Dolby noise-reduction system is a system designed to effectively reduce the annoying high-frequency "hissing" ooise typically heard from tapes if this system is not used. During recording, the system functions to increase the level of the high-frequency part of the sound, and then, during playback, that same portion is weakened and returned to the previous level. This unit inoludes two types of Dolby noise-reduction systems, the Dolby B NR-type and C NR-type, and Dolby HX PRO headroom extension system.

Dolby D-type noise-reductlon aystem

Neise is reduced to about one-third.
Use this system when playing back tapes recorded by the Dolby B noise-reduction system, such as prerecorded music tapes, etc.

Dolby C-type noise-reductlon aystem

Noise is reduced to about one-tenth.
Use this system for the recording and playback of cound seurces that have a wide dynamic range and good tone quality, such as FM broadcasts of live performances, etc., and for playing back suoh tepes.

Dolby HX PRO headroom extenslon system

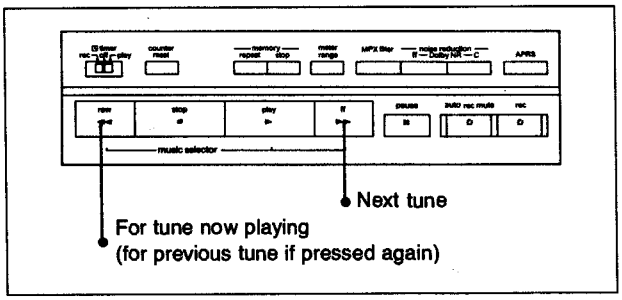
By functioning to improve the maximum ootput ievel of the tape's high-frequency range, this system permits recordings without a drop of the level of the seund cource's high-frequency range. In addition, by using the system in parallel with this unit's noise-reductien system, recording and playback with a greatly extended dynamic range is pessible.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
"DOLBY", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

To locate and play a certain tune

■ To find a tune's beginning ("music select" function)

Press ths rewind/fast-forwsrd/sesrch button during plsybsck.
Affer the tune's baginning is located, the tune will begin playing. (The playback indicator will flash rapidly whilo the tune's beginning is baing located.)



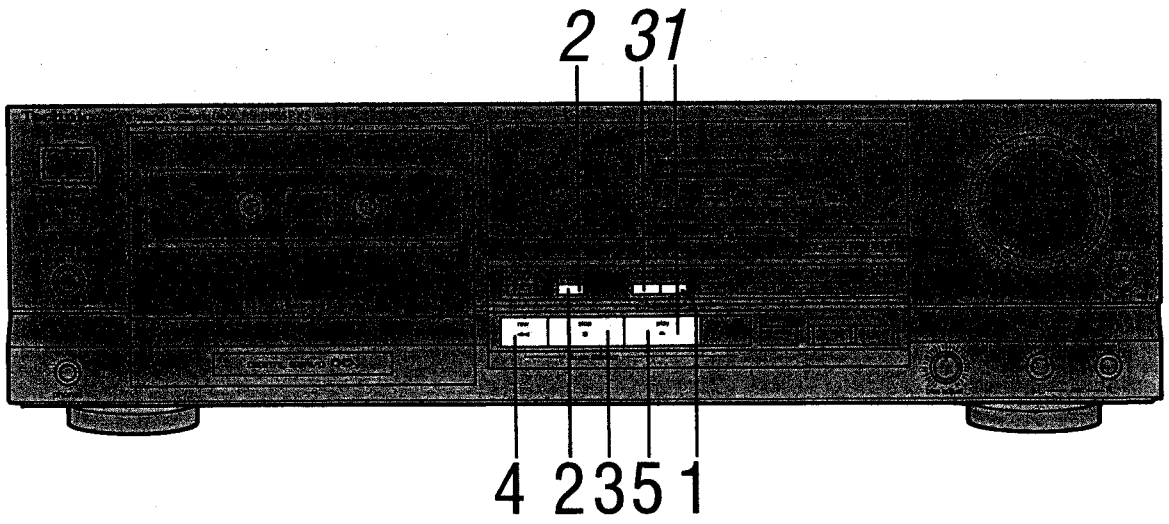
To locate a cartain tune that is several tunes bofore (or affer) the tune now playing, repeat the seme steps as many times as necessery.

Notes:
Note that this feature might not function correctly under the following circumstances:
- If there is noise botween tunes.
- If the silent interval between tunes is less than 3 seconds.
- If there is a particularly low level of seund, or a silent interval, at any place within the tune.
- If less than 10 seconds elapse until the start of the next tune.
- if a tape has been recorded with fade-ins and fade-outs.

Music select system manufactured under license of Starr B.A., Bruxelles, Belgium.

■ To fast-forward or rewind the tape

While in the stop mede, press the fast-forward (▶▶) button or the rewind (◀◀) button.



Playback after "memory stop"

The tape is rewound to the designated point and then play can be begun from that point.

■ To set the playback start point

1 **Press the memory-stop button and then begin the plsyback.**
(The memory-stop indicator will illuminate.)

2 **Press the counter-reset button at the point to whiob you wsnt the tape to rewind.**
(The counter will be reset to "000".)

■ To begin playbsck from the set point

3 **Press the stop button.**

4 **Press the rewind (◀◀) button.**
The tape will be rewound to the set point, and then will be automatically stopped.

5 **Press the playback button to begin the playback once again.**

- To cancel the "memory stop" function, press the memory-stop button once again.
(The memory stop indicator will be switched OFF.)

Noto:
There may be a slight difference (maximum +4 seconds) between the point where the tape counter was reset and the point where the tape actually stops during rewind.

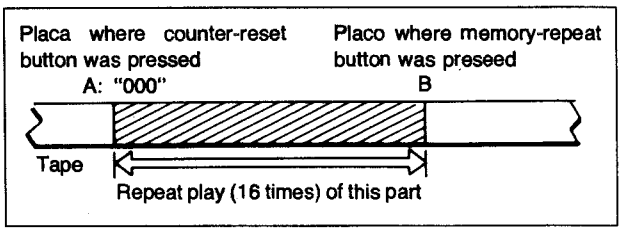
A⟷B repeat play ("memory repeat")

By simply designating the beginning ("000") and the end of the part that you want to play repoatedly, that part can be repeatedly played for as many as 16 times.
(This repeat-play feature can be used only in the playbeck mode.)

1 **Press the plsyback button.**
(The playback indicator will illuminate, and playback will begin.)

2 **Press the countor-reset button at the place (A) where you wsnt the repest play to start.**
(The counter will be reset to "000".)

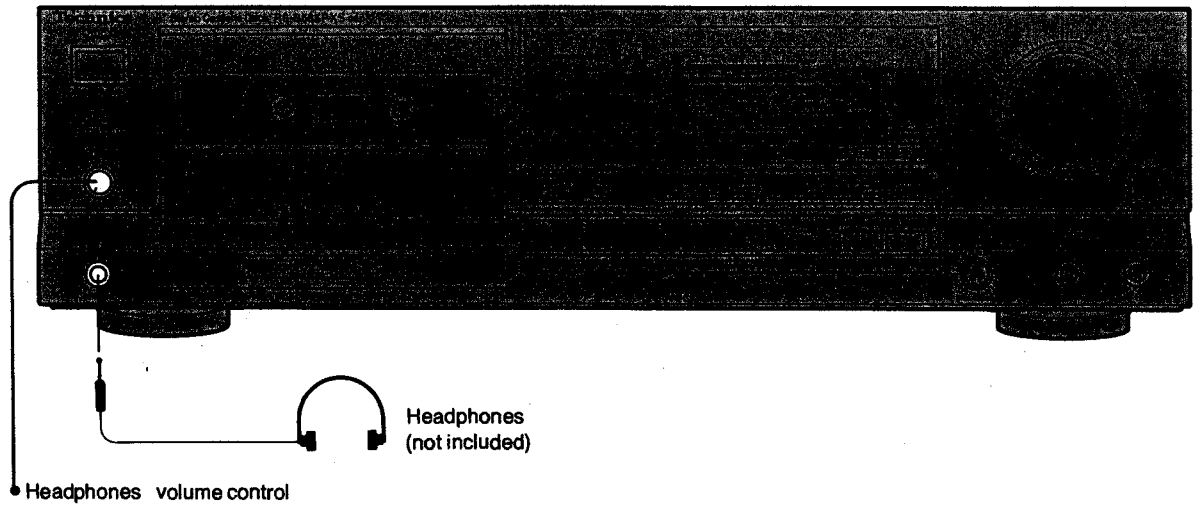
3 **Press the momory-repest button at the plsce (B) where you wsnt the repeat play to end.**
(The memory-repeat indicator will illuminate.)
When the memory-repoat button is preseed, the tape will be rewound to point (A), and the repeat play will then begin.



- To cancol the repeat-play function before it stops (after 16 repeats), press the memory-repeat button.
(The memory-repeat indicator will switch OFF.)
- To change the setting of point (B), first cancol the repeat-play operation (see above), and then press the memory-repeat button at the new place.

Notes:
- The repeat-play function will be cancolled if the stop button or the rewind/fast-forward/search button is pressed during repeat play. To stop temporarily, press the pause button.
- There may be a slight difference (maximum ±4 seconds) between the settings made for points (A) and (B) and the points at which the tape is actually played during repoat play.

Playback (continued)



To listen through headphones

1 **Set tha hoadphonaa voiuma controi to iow poaition before connocting haadphonaa.**

2 **Connect hoadphonaa (not inciuded) to tha hoadphonaa jack.**

3 **Use tha hoadphonaa voiuma controi to adjuat tho voiuma whiia iiataning to muaic.**

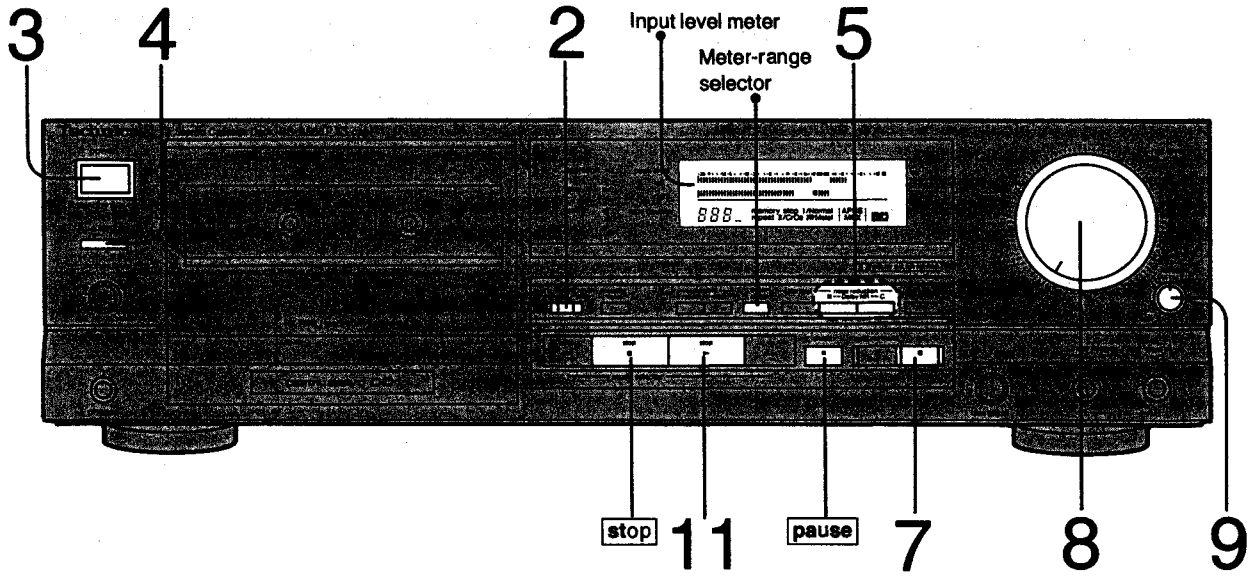
Plug type: 6 mm (1/4") phone plug, stereo type.

Note:
Avoid listening for a long time that it irritstes the ears.

Automatic-tape-select function

The unit is equipped with the automatic-tape-seleot feature; it autematically detects the type of tape being used, and then makes tha suitable adjustments accordingly of the bias and equalisation. (The tape-select indicator will illuminate.)

Recording



Normal recording

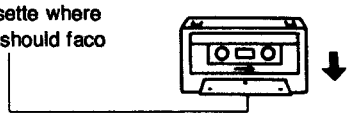
1 Switch the emplifier ON, end celect the Input source.

2 Switch OFF the timer switch.

3 Switch ON the power "standby ⏻ /on" switch.

4 Press the eject button to open the cessette holdsr, snd then Incert the cessette to be used for recording.

(The part of the cassette where tho tape is exposed should faco downward.)



5 Prese the button corresponding to the Dolby noise-reduction system (B or C) to be used.

(The Dolby noise-reduction ("B" or "C") indicator will illuminate.]

If neither Dolby noise-reduction system Is to be used, press the Dolby noise-roduction button corresponding to the Dolby noise-reduction indicator that is illuminated. (The indicator will then switch OFF.)

6 The eound source to be recorded should be plsyed before the recording is started In order to edjust the recording level.

7 Prese the record button.

(The recording indicator will illuminate and the playback indicator will flash continuously; the unit will be in the recording stand-by mode.)

8 Adjust the recording level.

Adjust se that the indication of the input level meter occasionally is as high as shown below.

	Normal tape CrO_2 tape	Metal tape
•Dolby NR B•C •NR off	DD (+3)	+6

For additional precision of the recording level sdjustment

Press the meter-range selector to display –7 to +6 of the input level meter.

(The level will be displayed in 1 dB increments.)

9 Adjust the left/right recording balance.

10 Stop the piey being done so as to adjust the recording level, and begin playing the sound source once again.

11 Press the pisyback button.

(The playback indicator will illuminate steadily, and the recording will begin.)

■ To temporerily stop recording
Press the peuse button.

(The playback indicator will begin flashing.)
To resume recording, press the playback button.

■ To stop recording
Press the stop button.

Recording (continued)

Recording after "memory stop"

If the recording start position is memorised at times such as those listed below, the tape can be automatically rewound to that position and recording (or playback) can commenco.

- When recording is to be conducted again
- When the calibration has been adjusted (see page 14)
- When a recording is to be played back

1 Preee the memory-stop button.
(The memory-stop indicator will illuminate.)

2 Press the counter-reset button.
(The counter will be reset to "000" and the start point will be set.)

3 Follow steps 5 through 11 in "Recording" to begin the recording.
(Refer to page 11.)

4 To begin the recording egeln from the beginning, press tho rewind (◀◀) button.
(The tape will be rewound to the set position where the counter was reset, and the tape will automatically stop.)

5 Begin the recording once sgeln.
(Follow steps 7, 10~11 in "Reoording".)

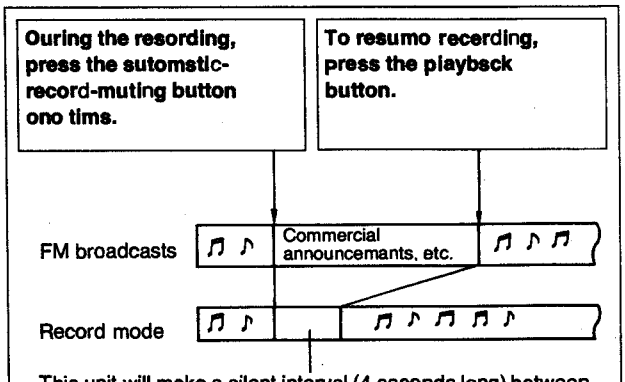
- To cancel the "memory stop" operation, prese the memory-stop button onca again.
(The memory-stop indicator will be switched OFF.)

Note:
There may be a slight differenca (maximum +4 seconds) between the point where the tape counter was reset and the point where the tape actually stops during rewind.

Automatic-record-muting function

By simply pressing the automatic-record-muting button while a recording is baing made, a silent (which is necessary for locating the beginning of a tune) can be made.

This feature is alse convenient for omitting, during recording, unwanted material such as commercial messages, etc.


Ouring the resording, press the sutomstic-record-muting button ono tims.
To resumo recerding, press the playbsck button.
FM broadcasts
Commercial announcemants, etc.
Record mode

This unit will make a silent interval (4 seconds long) between tunes, and then will change to the recording stand-by mode.

■ **To mske s silent intervsl of more than 4 seconds on ths tepe**
Press ths automstic-record-muting button for the neceecery numher of seconds.
The unit will change to the recording stand-by mode when the button is released.

To make microphone recordings

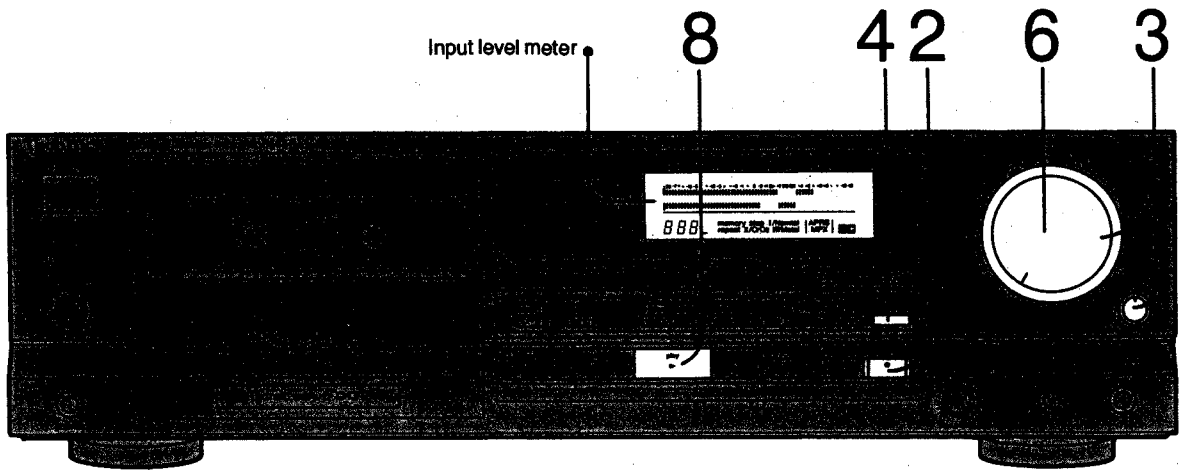
You can make your own unique original tapes by using microphones (not included) to record your instrumental or vocal performancos.

1 Connect the microphones to the microphone jsck(s).
(A microphone connected to the "L" jack will record sounds on the tape's leff channel, and a microphones connected to the "R" jack will record sounds on the right channel.)

2 Begin the recording by following the steps described in the "Recording" soction.

Note:
Be sure to disconnect the microphones when recording from a source (such as a tuner, turntable, etc.) connected to the line input terminals.
If they are not disconnected, the seurce connected to the line input terminals will not be recorded.

Recording with High Tone Quality



APRS function

Because the dynamic range of cassette tape is narrower than the dynamic rangs of a digital source, the recording will be too noisy if the recordlng level setting is too lew, and conversely, the recorded sound will be distorted if the setting is too high.
It was for this reason that it has always been recommended that the signals to he recorded be first (before recording) input to the cassette deck and the recording level then be set while watchlng the level meter, but, for former conventional level meter equipped with the peak-held function, it was necossery to re-adjust and input the signals agaln if the level sotting was too high or too low.

This unit, hewever, is equipped with the **APRS: Advenced Precise Recording-level Syetem**, which helds and dlsplays the maxlmum peak ef the input signal level, so that once the peak level of the source is held, there is no necessity to re-input the seurce signals, and the eptimum recording level can be cet.

- The APRS function can be used only during the recording-standby mode.

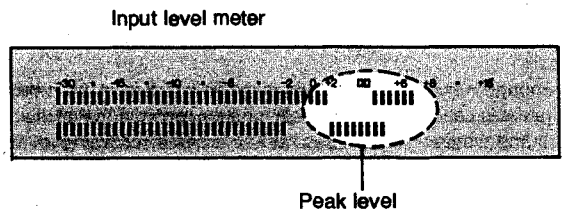
1 Prepare for recording as dascribed in stsps 1 to 6 of tha "Recording" section.
(Refer to page 11.)

2 Presa tha record button.
(The recording indicator will illuminate and the playback indicator will flash contlnuously; the unit will be In the recording stand-by mode.)

3 Set tha recording-iavsi controi and tho recording-baiance contrei to tha suitabia positlon for tha sound source.

4 Press tha APRS button.
(The APRS indicator will illuminate.)

5 Play tba sound source to be recorded, from beginning to and.
[The peak level (the highest level of the input signal) of the sound source will he displayed and held on the input-level meter.]



Note:
The range within which the peak level can be held is −8 dB to +16 dB. Note that the APRS indicator will flash continuously if the peak level of the sound source is input at a level that exceeds the maximum recording level (+16 dB).
If that happens, press the APRS button to cancel the APRS function, and then reset the recording level and set the APRS once again.

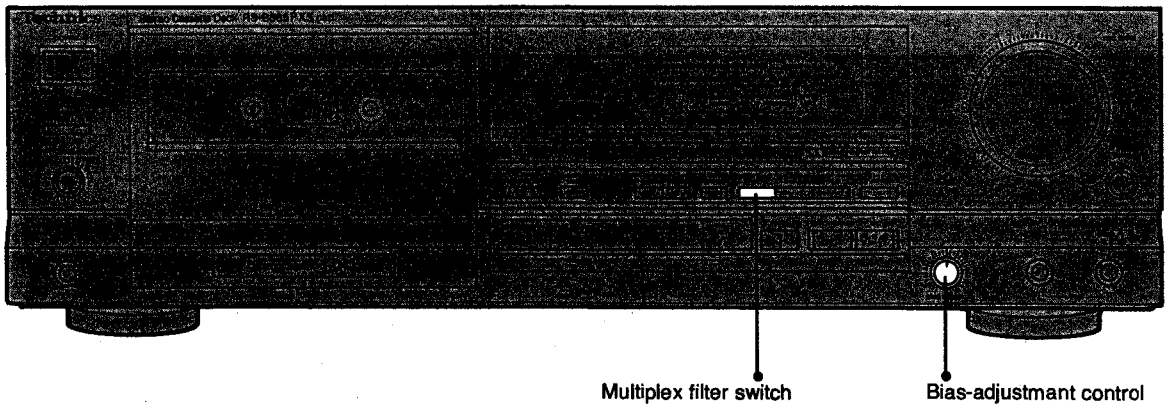
6 Using tho recording-laval control, adjust ths peak iaval to tha dasired sotting.
The peak level will move to the right when the recording-level control is turned to the right, and will move to the left when the recording-level control is turned to the left.

- The recording-balence control cannot be used to adjust the peak level.

7 Begin playing ths sound source from ths beginning once again.

6 Press tho playback button.
(The playback indicator will illuminate steadily, and the recording will begin.)
The APRS indicator will switch OFF, and the indication of the input-level meter will return to the ordinary peak-hold mode.

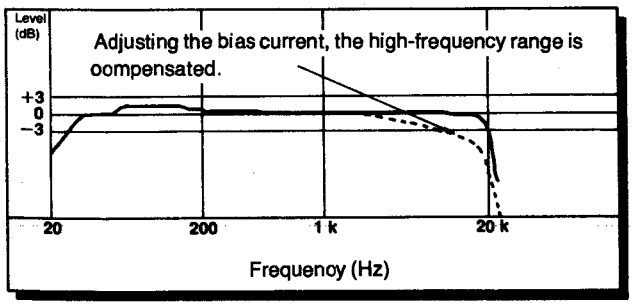
Recording with High Tone Quality (continued)



Recording-level adjustment hints

Whon recordings are made at the seme recording level and by using different brands of tape, evon though the type of tape (regular or "normal" tape, for example) is used, when thoso recordings are playod back the listonar may notice that the high-frequency sounds aro not as distinot on one tape or the other, etc.
Tho reason that suoh differencos may be noticad is because there aro differenoos of the frequency rasponso (partioularly in the treble range) between cassette tapes of tbe various manufacturers of tape.
Although, for recordings and playbeck in which a noise-reduction system is used, it is the principle for such recordings that the recording and playback processes be at the same recording level, if, as a rosult of the roason described abeve, thera is a differenco of the frequency respense, there will result a difforonca in tho processos for recording and for playbaok, and correct rocordings and playbaok cannot be accomplished.

In order to overcomo this problem, this unit includes a bias-adjustmont control (for compensation of the frequency response) se that tho most appropriate level during recording can be mads.



During recording

1 **Make a recording as explained in steps 1 through 11 of "Recording".**
(Rafer to pago 11.)

2 **While switching back and forth betwsen the original aound source and the recorded tape by using the input selector on the connected amplifier, adjust (by using the bias-adjustmant control) so that the trebie tone quality is tha aame for both.**
When making this adjustment it may be helpful to use as a reference the changes made (by the bias-adjustment control) of the between-station noise heard on te FM band. Alse note that tho adjustment can be made more precisely by listening through headphonas whilo making the adjustment. Connect tho hoadphonas to tha hoadphonos jack of the amplifier.

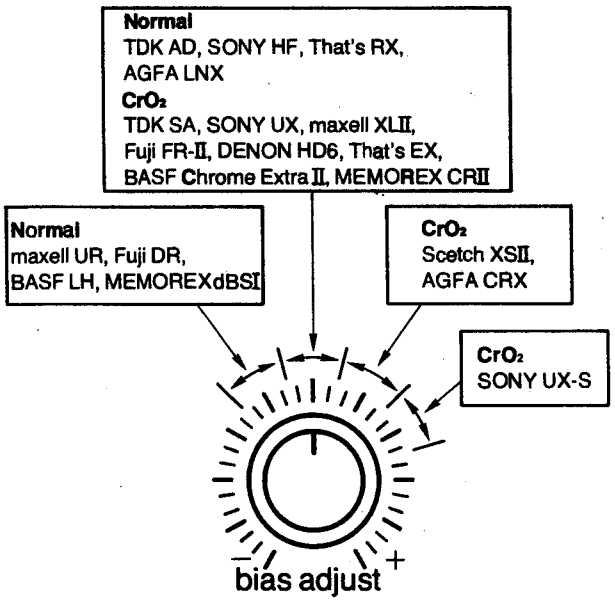
Bias becomss shallowor; tho trabla characteristio increases.

Bias becomes deeper; tho treble characteristic decreaees.

3 **After repeating the above steps if neceasary, rewind the tape and then begin the recording once again.**

Notes:
- When metal-coated tape is used, there is almost no difference of the bias charactaristics, so thara is no necessity to make the bias adjustmant (componsation of the frequency response). (No adjustment can be mada.)
- The adjustmonts for the bias does not neod to be made again se long as you continuo to use the same typo and brand of tape that was used when these adjustments are first made.

Refer to the disgrsm below whsn sdjueting ths biss to mstch a specific tape.



Note:
The diagram shows recommended values based on representative tape characteristics. There is no guarantee that they will produce optimal results in all cases due to slight variations between individual cassettes and cassette decks.

MPX filter

Because the pilot signals*, etc. included with FM stereo broadcast signals are subjected to Dolby eoise-reduction processing in the same way as the music signals whan an FM sterso broadcast is being recorded, there is apt to be beterioration of the tone quality, and the noise-reduction effect is reduced.

This unit, however, is provided with an MPX filter that filters out the 19 kHz frequency, which is the froquency of the pilot signal.
Note that thers is virtually no audlble effect upon the tone quality as a result of the use of the MPX filter.

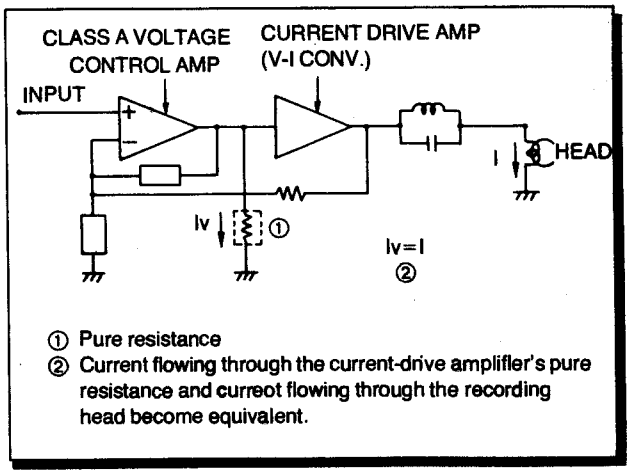
This switch can be used during tho recording of sn FM otereo broadcast that smploys Dolby noise reduction so ss to pravsnt misoperation of tbe Dolby noise reduction.
This switch, howevsr, should be switchad OFF when s sound source other thsn ths FM broadcaet is being recordad, such ss, for sxamplo, s sound source thst hss a wido frequsncy rango, such as a sompect disc, etc.

***Pilot signsl**
The pilot signal is a signal that is used to separate FM broadcast signals in stereo (left and right channels); this signal is generated on a frequency that is very close to the 19 kHz music band.

Linear Magne-Field Class AA

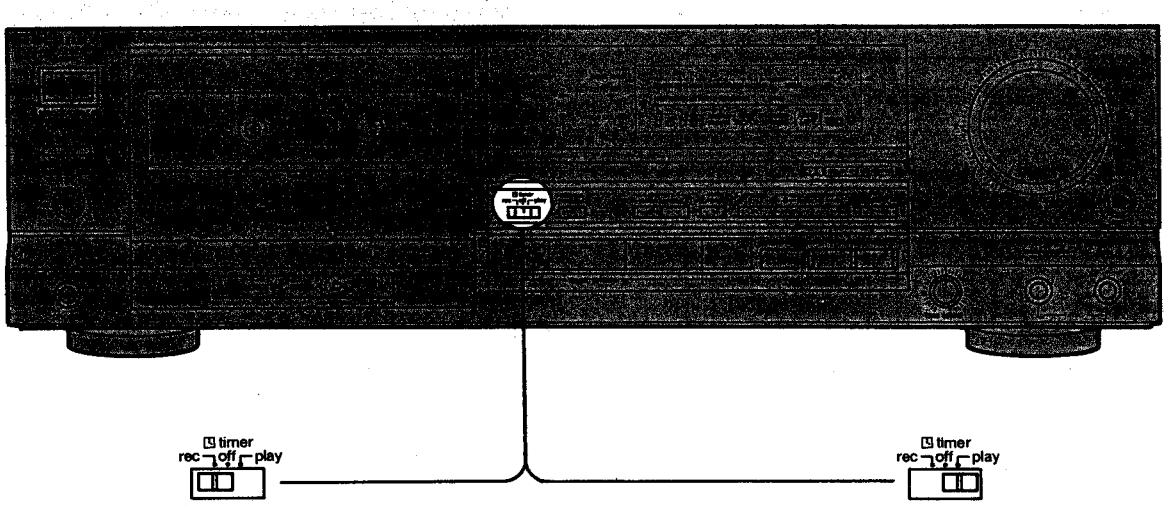
The recording-equaliser amplifier is an amplifiar for supelying (to the head) the current necessary for recording. Usually, loads such as the recordlng bead aod bias trap circuitry (ciroultry for control of the bias current) would be applied to the output of this amplifier, with the result thet complex changes of the current phase ecour, ceusing distortion of the recordlng signal.

The recording-equaliser amplifier used in this unit, however, is a linear magne-field class AA amplifier thet is a comblnation of class A voltage-control amplifier circuitry and current-drive amplifier circuitry. (See the figure below.) As a result, a current flow that is equivalent to the current flowing in the pure resistance of the current-drive amplifier can be supplied te the recording head.
Consequently, a magnetic field that corresponds to the input signals is produced at the head and is recorded on the tape, which means that recorded seund are faithful te the original sound seurce, without fluctuations of the current phase.



① Pure resistance
② Current flowing through the current-drive amplifier's pure resistance and curreot flowing through the recording head become equivalent.

Timer Recording/Playback



If an audio timer (not included) is connected to this unit, recording of a radio broadcast, or tape playback, will automatically begin at the preset time. Timer recording or playback is alco possible by using a tuner with timer.
Connect the AC power cord of this unit to the power seurco outlet of the timer. (See the operating instructions of the timer for detailed information.)

Timer recording

1 **Prepsre fer recording.**
Follow steps 1 through 9 of "Recording" on page 11. After adjusting the recording level, press the stop button.

2 **Set the timer te the desired recerding-start timer.**
(Power "standby ⏻ /on" switch will be "standby ⏻ " position.)

3 **Set the timer switch te the "rec" pesitien.**
(At the set time, the power "standby ⏻ /on" switch will come cn and the broadcast will be recorded.)

■ After setting the timer

Check to be sure that the power "standby ⏻ /on" switch is set to the "on" position.

Timer playback

1 **Rewind the tape te the pesition from which yeu want piayback te begin.**
(Refer to page 6.)

2 **Set the timer te the desired playback-start time.**
(Power "standby ⏻ /on" switch will be "standby ⏻ " position.)

3 **Set the timer switch te the "pisy" position.**
(At the set time, power "standby ⏻ /on" switch will come on and the playbeck will begin.)

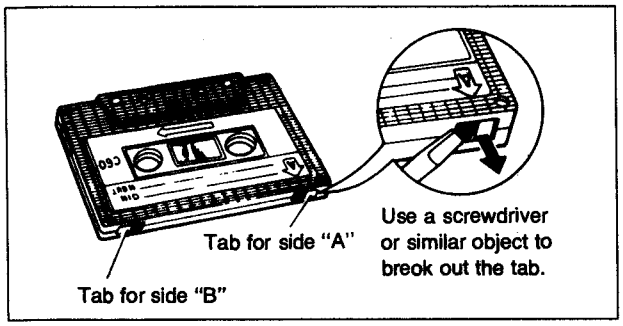
■ After setting the timer

Check to be sure that the power "standby ⏻ /on" switch is set to the "on" position.

After Recording

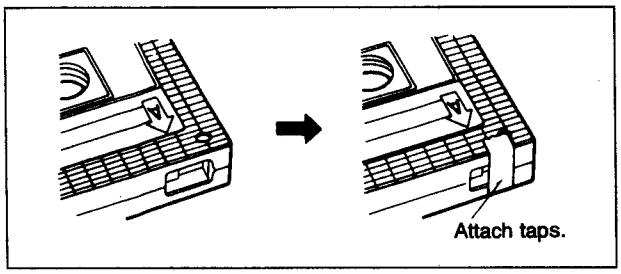
To prevent erasure of recorded sounds

Remove the erase-prevention tabs (thus preventing recording).



■ To re-record on a protected caesette

Block up the hcle by adhering a piece of collophane tape to tha area where the safety tab was broken out.



To erase recorded sounds

When new recordings are made on a recorded tape, all counds recorded on that portion of ths tape are automatically erased. To erase a tape without making a nsw recording, follew the steps below.

1 **Insert the recorded caesette into the caasette holder of tape deck.**

2 **Set the recording-level control to "0".**

3 **Preae the Dolby nolae-reduction button corresponding to the Dolby nolee-reduction indicator that la illuminated.**
(This indicator will then switch OFF.)

4 **Preae the record button.**

5 **Preaa the playback button.**

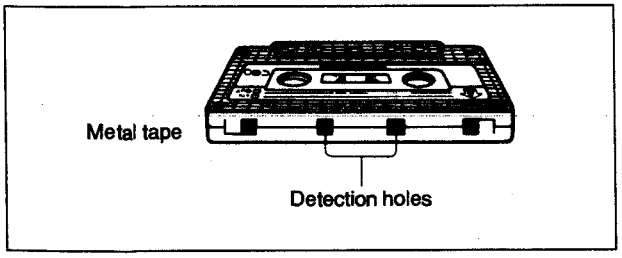
About Cassette Tapes

Avoid the following types of tapes

- **120-mineta (or longor) tapes**
  Because this tape is very thin, it might strstch during use, hecome tangled with rotating parts in this unit, and/or tape movement might not be stable.

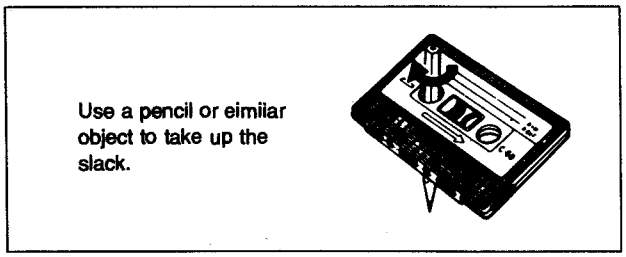
- **Fe-Cr tape (TYPE III)**
  The high range will be emphasised and a flat frequency respense charactoristic sannot be obtained.

- **Metal tape without detection holes in the cassette**
  Racordings will be vsry distorted. (There is no playback problem, hcwever.)



Notes about the handling of cassettes

If the tape in the cassette is loose, the tape can oasily brsak during use or otherwisa be damaged.
Never touch the tape itself, or attempt to pull it out of the cassette.



Avoid tape storage in the following places

Tape can be damaged if it is stored in places such as described below.

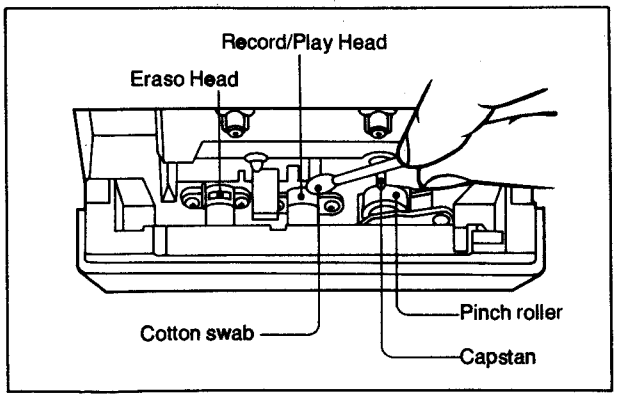
- Wharo ths temperature is high (95°F/35°C or higher) or whsre the humidity is high (80% or higher).
- Where there ie a strong magnetic field (near a speaker, on top of a TV, etc.).
- In direct sunlight.

Maintenance

Head care

To assurs good sound quality for recording and playback, be sure to cloan the heads after approximately every 10 hours of use.

1) Press the power "standby ⏻ /on" switch to turn the unit off.
2) Prass the eject button.
3) Clean tho heads, pinch roller and the capstan shaft with a cotton swab (or with a soft, lint-free cloth) slightly moistened with alcohol.
   Do not uso any solution othor than alcohol for head cleaning.



Head demagnetisation

In order to maintein good sound quality during recording and playback, it is recommended that the heads should be demagnetised if distortion or poor sound quality persist after cleaning the heads.

If the heads become magnetised, they could create noise in recordings, loss of high-frequency responso, or erasure of valuable recordings. Several types of head demagnetieers are available and may be purchased at local electronice supply stores. Follow the instructions that are sopplied with the device.

- Do not bring any typo of metal objects or tools such as magnetic screwdrivers in contact with the head assembly.

Maintenance of external surfaces

To clean this unit, use a soft, dry cloth.

For very dirty surfaces, dip a soft cloth in a weak soap-and-water solution and wring well. After cleaning, wipe with a soft, dry cloth.

Never use alcohol, paint thinner, benzine, or a chemically treated cloth to clean this unit.

Such chemicals may damage the unit's finish.

Technical Specifications

■ CASSETTE DECK SECTION

Deck system	Stereo cassotte deck
Track syetam	4-track, 2-channel
Heeds	
Rec/Play	Permalloy head
Erasura	Double-gap ferrite head
Motora	
Capstan drive	Direct drive DC motor
Reel table drive	DC motor
Recording eystem	AC bias
Rias frequency	80 kHz
Ereeing system	AC erase
Tepe speed	4.8 cm/soc. (1⅞ ips)
Frequency raeponee	
HORMAL	30 Hz~16 kHz (±3 dB)
	20 Hz~18 kHz (DIN)
CrO_2	30 Hz~18 kHz (±3 dB)
	20 Hz~17 kHz (DIN)
METAL	30 Hz~18 kHz (±3 dB)
	20 Hz~18 kHz (DIN)
S/N (signal level=max recording lovol, CrO_2 type tapo)	
Doiby C HR on	74 dB (CCIR)
Doiby B HR on	66 dB (CCIR)
Doiby NR off	56 dB (A weighted)
Wow end flutter	0.05% (WRMS)
	±0.15% (DIN)
Fsst forwerd end rawind timee	Approx. 80 seconds with C-80 cassette tepe
Input sensitivity snd impedsnco	
MiC	0.25 mV/400 Ω~10 kΩ
LINE IN	80 mV/47 kΩ
Output voltage snd impedsnee	
LiNE OUT	400 mV/600 Ω
HEADPHONES	125 mV/8 Ω
	(8 Ω~600 Ω)

■ OENERAL

Power consumption	21 W
Power supply	AC 50 Hz/80 Hz, 240 V
Dimensions (W×H×D)	430×125×290 mm
	(16 15/16"×4 15/16"×11 7/16")
Weight	4.4 kg (9.7 lb.)

Note:
Specifications are subject to change without notico.
Weight and dimensions are approximate.

Troubleshooting Guide

Before requesting service for this unit, check the chart bolow for a possible ceuse of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore propor oporation.
If yeu are in doubt about some of the check points, or if the remedies indiceted in the chart do not selve the problem, refer to the directory of Authorised Servioe Centres (enclosed with this unit) to locate a convenient service centre, or censult your Technics dealer for instructions.

Problem	Prebeble cause(e)	Suggeeted remedy
While using the tape deek		
Tspe movos but no sound is hsard.	The volume control of the amplifier is set to its minimum position.	▪Adjust the volume centrol to the desired level.
	The input celector of the amplifier is not set the "tape" position.	•Set to the "tape" position.
	"LINE IN" and "LINE OUT" steroo connection cebles have been connected in reverse.	•Connect them properly.
Distorted oound.	The recording level is too high.	•Select the appropriate recerding level.
Praviousiy recorded aound hss not been srased.	Erase head is dirty.	•Clean the heads.
Sound output la hosrso or unsteady.	Heads are dirty.	•Clean the heads.
	Tape is damaged.	•Try operation with a new cassette; if there is no problem with the new cassette, discard the damaged cessette.
Poor aound qusiity (especisiiy in ths high trabis and low baaa rangss).	The correct Dolby noise-reduction button is not set.	•Set it to the correct position.
Sound is iow, poor tons, intormittent sound, noise.	Heads, capstan and/or pinch roller are dirty or tape is damaged.	•Clean the heads, capstan and/or pinch roller, or try a new cessette.
Recording is not possibls.	The recording level control is at the "0" position.	•Select the appropriate recording level.
	No safety tab on cassette tapo.	•Block up the hole by adhering a piece of cel-lophane tape to the area where the safety tab was broken out.
High-pitched nolso ("howiing") is hsard whils a microphons is being used.	The microphone is being used too close to the speakers.	•Use the microphone farther away from the speakers or decrease the volume level.

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